

WHAT IS CLAIMED IS:

1. A column unit to adjust the height of a product comprising:
a base tube;
a spindle moving up and down in the base tube;
a cylindrical shaped guide sleeve fixed onto the external surface of the spindle from an upper portion of the spindle to a height lower than the lower end of the spindle, moving up and down along with the spindle; and
an adhesive layer applied between the guide sleeve and the spindle to fixably adhere the guide sleeve to the spindle.
2. A column unit according to claim 1, further comprising a bushing placed between the internal surface of a tube guide placed inside of the base tube and the external surface of the guide sleeve to enhance supporting strength of the spindle.
3. A column unit according to claim 2, wherein the bushing has a lubricant layer therein.
4. The column unit according to claim 2, wherein the bushing is fixed to the internal surface of the tube guide to allow its upper portion to be positioned higher than upper portion of the tube guide.

5. The column unit according to claim 2, wherein the bushing is cylindrical shape.

6. The column unit according to claim 2, wherein the bushing has a plurality of vertical grooves therein.

7. The column unit according to claim 3, wherein the lubricant layer is a nylon layer.

8. The column unit according to claim 7, wherein the nylon layer has a thickness of 2~1000 μm .

9. The column unit according to claim 1, wherein the adhesive layer has a thickness of 0.005~0.6 mm.

10. A column unit to adjust the height of a product comprising:
a base tube;
a spindle moving up and down in the base tube;
a guide sleeve fixed onto the external surface of the spindle;
an adhesive layer formed between the guide sleeve and the spindle to fixably adhere the guide sleeve to the spindle;
a tube guide inserted into the inside of the base tube to support the guide sleeve; and
a piston rod and piston fixed to the base tube.

11. A column unit according to claim 10, wherein the adhesive layer is formed at the gap in-between the guide sleeve and the spindle by applying the adhesive from the top of said gap.

12. A column unit according to claim 10, wherein the adhesive layer is formed at the gap in-between the guide sleeve and the spindle by partially applying the adhesive into the gap.

13. A column unit according to claim 10, wherein the lower end of the guide sleeve is placed below the lower end of the spindle.

14. A column unit according to claim 10, wherein the upper end of the guide sleeve is placed in the upper portion of the spindle.

15. A column unit according to claim 10, further comprising a bushing placed between the internal surface of the tube guide and the external surface of the guide sleeve to enhance the supporting strength of the spindle.

16. A column unit to adjust the height of a product comprising:
a base tube;
a spindle moving upward and downward directions along the base tube;
a guide sleeve fixed to the outer surface of the spindle, wherein the guide sleeve is fixed to the spindle in the manner of adhesion;
a piston rod relatively fixed to a base tube; and

a piston inserted into the spindle to form gas chamber in the spindle,
wherein the piston is combined with the piston.